



**Stakeholder Comparison Comment Rationale Matrix**

**2010-07-22**

**AESO AUTHORITATIVE DOCUMENT PROCESS**

**Alberta Reliability Standard – PRC-017-AB-0 Remedial Action Scheme Maintenance and Testing**

*NOTE: The AESO is asking market participants to give an initial indication of their support for, or opposition to, the specific Alberta Reliability Standard variances to the NERC requirements referenced below. Such an initial indication assists in the AESO's practical understanding of the receptivity of the industry to the proposed changes, and in that regard the AESO thanks, in advance, all market participants who choose to respond. With regard to the specific standard changes and their implications, such responses are without prejudice to the rights of market participants under the Act, any regulations, or related decisions of the Commission.*

Date of Request for Comment [yyyy/mm/dd]: 2010/07/22  
Period of Consultation [yyyy/mm/dd]: 2010/07/22 through 2010/08/27  
Comments From: TransAlta  
Date [yyyy/mm/dd]: 2010/08/27

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*Listed below is the summary of changes for the proposed new, removed or amended sections of the standard. Please refer back to the Letter of Notice under the "Attachments to Letter of Notice" section to view the proposed content changes to the standard. Please double-click on the check box for either "Support" or "Oppose" and/or place your comments, reasons for position, and alternate proposals underneath (if any).*

**COMPARISON BETWEEN NERC PRC-017-0 AND ALBERTA PRC-017-AB-0  
REMEDIAL ACTION SCHEME MAINTENANCE AND TESTING**

NERC PRC-017-0	Alberta PRC-017-AB-0	AESO Reason for Difference	Stakeholder Comments	AESO Replies
<p><b>Purpose</b> To ensure that all Special Protection Systems (SPS) are properly designed, meet performance requirements, and are coordinated with other protection systems. To ensure that maintenance and testing programs are developed and misoperations are analyzed and corrected.</p>	<p><b>Purpose</b> The purpose of this reliability standard is to ensure adequate maintenance and testing of RASs and equipment integral to RASs.</p>	<p>Clarified the purpose to align with the content of the reliability standard.</p>		
<p><b>Applicability</b> 4.1. Transmission Owner that owns an SPS 4.2. Generator Owner that owns an SPS 4.3. Distribution Provider that owns an SPS</p>	<p><b>Applicability</b> This reliability standard applies to:</p> <ul style="list-style-type: none"> <li>• TFOs that own a RAS or equipment integral to a RAS that is listed as either an AB RAS or WECC RAS in the ISO RAS database as published on the AESO website, and as may be amended from time to time by the AESO on notice to market participants.</li> <li>• GFOs that own a RAS or equipment integral to a RAS that is listed as either an AB RAS or WECC RAS in the ISO RAS database as published on the AESO website, and as may be amended from time to time by the AESO on notice to market participants.</li> <li>• WOs that own a RAS or equipment integral to a RAS that</li> </ul>	<p><input type="checkbox"/> New <input checked="" type="checkbox"/> Amended <input type="checkbox"/> Deleted</p> <p>Amended to identify the responsible entities in Alberta.</p> <p>Identified the remedial action scheme classification that applies to this standard and referenced the ISO RAS database that identifies the classification of each remedial action scheme.</p> <p>The Alberta Reliability Standards section of the AESO website, and in particular the section that contains this reliability standard, will contain reference to the ISO RAS database. The ISO RAS database is currently available on the AESO website,</p>	<p><input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose</p> <p><i>Insert comments, reason for position, and alternate proposal (if any).</i> TransAlta recommends AESO define in this standard the exact location of the ISO RAS database for clarity.</p> <p>TransAlta is also concerned that the ISO RAS database located under PRC-001-AB-1 is not versioned and has no dates indicating the last time it was modified. When entities review this database, they won't know if there were any changes made</p>	

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	<p>is listed as either an AB RAS or WECC RAS in the ISO RAS database as published on the AESO website, and as may be amended from time to time by the AESO on notice to market participants.</p> <ul style="list-style-type: none"> <li>the ISO</li> </ul>	<p>under current Alberta Reliability Standard PRC-001-AB-1 Protection System Coordination.</p>	<p>and this could cause them to be non-compliant. TransAlta recommends the AESO add versioning and dates</p>	
<p><b>Effective Date</b> April 1, 2005</p>	<p><b>Effective Date</b> One hundred and eighty (180) days after the date of approval by the Commission.</p>	<p>To allow a reasonable amount of time for Alberta entities to implement this Alberta Reliability Standard.</p>	<p><input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose</p> <p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p> <p>TransAlta thanks AESO for making some requirements and measures clearer than NERC's version in that it states 'on a go forward basis from the effective date...'</p>	
<p><b>R1.</b> The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall have a system maintenance and testing program(s) in place. The program(s) shall include:</p>	<p><b>R1</b> Each TFO, GFO, and WO, or any combination thereof, that owns a RAS or equipment integral to a RAS must have RAS maintenance and testing program(s) in place. These programs must:</p>	<p><input type="checkbox"/> New <input checked="" type="checkbox"/> Amended <input type="checkbox"/> Deleted</p> <p>Amended for clarity and consistency.</p> <p><b>Alberta Variance:</b> In order to</p>	<p><input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input checked="" type="checkbox"/> Oppose</p> <p><i>Insert comments, reason for position, and alternate proposal (if</i></p>	

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<b>NERC PRC-017-0</b>	<b>Alberta PRC-017-AB-0</b>	<b>AESO Reason for Difference</b>	<b>Stakeholder Comments</b>	<b>AESO Replies</b>
<p><b>R1.1.</b> SPS identification shall include but is not limited to:  <b>R1.1.1.</b> Relays.  <b>R1.1.2.</b> Instrument transformers.  <b>R1.1.3.</b> Communications systems, where appropriate.  <b>R1.1.4.</b> Batteries.</p> <p><b>R1.2.</b> Documentation of maintenance and testing intervals and their basis.</p> <p><b>R1.3.</b> Summary of testing procedure.</p> <p><b>R1.4.</b> Schedule for system testing.</p> <p><b>R1.5.</b> Schedule for system maintenance.</p> <p><b>R1.6.</b> Date last tested/maintained.</p>	<p><b>R1.1</b> identify the equipment integral to each RAS including:</p> <ul style="list-style-type: none"> <li>• relays;</li> <li>• instrument transformers;</li> <li>• communications systems, where appropriate;</li> <li>• batteries; and</li> </ul> <p>other equipment as required for the RAS to function.</p> <p><b>R1.2</b> have documentation of maintenance and testing intervals and the basis for setting these intervals</p> <p><b>R1.3</b> have a summary of testing procedures for each type of equipment identified in requirement R1.1</p> <p><b>R1.4</b> have a schedule for testing RAS and each type of equipment identified in requirement R1.1</p> <p><b>R1.5</b> have a schedule(s) for maintaining RAS and each type of equipment identified in requirement R1.1</p> <p><b>R1.6</b> identify the date the RAS and each type of equipment identified in requirement R1.1 was last tested and</p>	<p>capture all components that make up a remedial action scheme, the identification of other equipment as required for the remedial action scheme to function was added to the list of items in requirement R1.1.</p>	<p><i>any</i>).</p> <p><b>R1 &amp; R1.1</b> TransAlta is concerned that using the words 'or equipment integral to a RAS' may go beyond the specific RAS equipment Does this mean that every relay is part of a RAS? NERC's requirement more accurately defines the requirements and uses the words 'shall included by not limited to'. We request that the AESO either use the NERC wording or else clearly define what "equipment integral to the RAS" means.</p> <p><b>R1.1</b> AESO could improve on the clarity over the NERC standard by removing the words 'where appropriate' in the bullet for communications systems. TransAlta believes all RAS systems have a communication component.</p> <p><b>R1.1</b> - AESO added the bullet</p> <ul style="list-style-type: none"> <li>• any other equipment as required for the RAS to function.</li> </ul> <p>This "any other equipment" is unclear and does not provide any guidance as to what is required in</p>	

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	maintained		<p>order to ensure compliance. This bullet should be removed.</p> <p><b>R1.3</b> - Adding the words 'for each type of equipment identified in requirement R1.1' is unnecessary and duplicative of R1.1. These words should be removed as they provide no further clarity or value and actually makes it harder to read and understand than the NERC version.</p> <p><b>R1.4</b> – same comment as R1.3</p> <p><b>R1.4 and R1.5.</b> TransAlta recommends adding the word 'system' after the acronym 'RAS' in each of these sub requirements. Adding the word system will ensure that all components and entities and are included in the test.</p> <p><b>R1.5</b> – same comment as R1.3</p> <p><b>R1.6</b> – same comment as R1.3</p>	
	<b>R2</b> Each TFO, GFO, and WO that owns a RAS or equipment integral to a RAS must, as of the effective date of this reliability standard, maintain	<input checked="" type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Deleted	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input checked="" type="checkbox"/> Oppose	

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	and test each RAS or components of a RAS in accordance with its maintenance and testing program(s) as required by requirement R1.	Added to for clarity that implementation of maintenance and testing programs for RAS is to occur on a go forward basis from the effective date of this reliability standard.	<p><b>R2</b> - TransAlta is concerned that using the words 'or equipment integral to a RAS' may go beyond the specific RAS equipment Does this mean that every relay is part of a RAS?</p> <p>Also using the words 'or components of' may allow the entity to chose which they want to maintain and test: the whole RAS or just components of. For this reason, TransAlta recommends removal of these words.</p> <p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p>	
<p><b>R2.</b> The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of the program and its implementation to the appropriate Regional Reliability Organizations and NERC on request (within 30 calendar days).</p>	<p><b>R3</b> Each TFO, GFO, and WO that owns a RAS or equipment integral to a RAS must provide documentation of the existence and implementation of its RAS maintenance and testing program(s) as required in requirement R1 within twenty (20) days of receiving a written request from the ISO.</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p><b>Alberta Variance:</b> Sub-requirement R3 amended for Alberta participants to provide documentation to the ISO as the compliance monitor for TFOs, WOs and demand customers and upon receiving a written request from the ISO.</p>	<p><input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input checked="" type="checkbox"/> Oppose</p> <p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p> <p>TransAlta recommends striking the word "existence" from this requirement. We believe the AESO is looking for documentation of the program,</p>	

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			<p>which by definition proves its existence. We are not certain what the AESO would be looking for when requesting documentation of existence.</p> <p>The AESO is making this requirement more stringent on effective entities and to better align with the NERC standard, TransAlta suggests 30 calendar days.</p>	
	<p><b>R4</b> The ISO must maintain and publish a list of all RASs to which this reliability standard applies.</p>	<p><input checked="" type="checkbox"/> New  <input type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p><b>Alberta Variance:</b> Sub-requirement R4 added for the ISO to maintain and publish a list of relevant remedial action schemes so that the Alberta entities were notified of which requirements applied to which remedial action schemes.</p>	<p><input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input type="checkbox"/> Oppose</p> <p><i>Insert comments, reason for position, and alternate proposal (if any).</i>            TransAlta recommends that this requirement be rewritten to state: 'The ISO must maintain and publish the ISO RAS database and notify effective entities of any changes'. AESO needs to indicate that sufficient time be given to new affected entities in order to become compliant.</p>	
<p><b>M1.</b> The Transmission Owner, Generator Owner, and Distribution</p>	<p><b>MR1</b> Written RAS maintenance and testing program(s) exists and</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended</p>	<p><input type="checkbox"/> Support  <input type="checkbox"/> Support with language</p>	

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<p>Provider that owns an SPS shall have a system maintenance and testing program(s) in place that includes all items in Reliability Standard PRC-017-0_R1.</p>	<p>includes all the elements as identified in sub-requirements of requirement R1.</p> <p><b>MR1.1</b> A written RAS maintenance and testing program exists that specifies all equipment as identified in requirement R1.1.</p> <p><b>MR1.2.</b> A written RAS maintenance and testing program exists which specifies maintenance and testing intervals and the basis for setting those intervals.</p> <p><b>MR1.3</b> A summary of testing procedures exists in the written RAS maintenance and testing program that specifies the test procedures for each type of equipment identified in sub-requirement, R1.1.</p> <p><b>MR1.4</b> A written RAS maintenance and testing program includes testing schedules for each RAS and each type of equipment identified in requirement R1.1.</p> <p><b>MR1.5</b> A written RAS maintenance and testing program includes maintenance schedules for each RAS and each type of equipment</p>	<p><input type="checkbox"/> Deleted</p> <p>Amended to align with requirement R1.</p>	<p>suggestions</p> <p><input checked="" type="checkbox"/> Oppose</p> <p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p> <p><b>MR1.1 to MR1.6</b> does not add clarify or value. TransAlta recommends AESO use the NERC M1. This would help to simplify the standard. AESO has stated that R1 and all associated sub requirements were amended for clarity and consistency, but in fact TransAlta believes that it is now more difficult to read. We recommend using the NERC measure and just change the effected entities.</p> <p>TransAlta sees no value in the large number of measures that are defined for each sub requirement given that they simply provide a reference back to the sub requirement but no additional guidance as to what is required. TransAlta therefore recommends that MR1 should be reworded as suggested below and that all of the remaining measures for the</p>	

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	<p>identified in requirement R1.1.</p> <p><b>MR1.6</b> Evidence exists of the date the RAS and each type of equipment identified in requirement R1.1 was last tested and maintained.</p>		<p>sub requirements be removed.</p> <p><b>Proposed wording for MR1.</b> Each TFO, GFO, and WO, that owns a RAS must have RAS maintenance and testing program(s) in place that includes all items in Reliability Standard PRC-017-AB-0_R1.</p> <p><b>R1.3 to R1.6</b> – Same concern using the words ‘for each type of equipment identified in requirement R1.1’ See our comments in the Requirement section.</p>	
	<p><b>MR2</b> All records of RAS testing and maintenance, created after the effective date of this reliability standard exist and are complete, accurate and consistent with the maintenance and testing program(s) as required in requirement R1.</p>	<p><input checked="" type="checkbox"/> New  <input type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>Added to align with requirement R2.</p>	<p><input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input type="checkbox"/> Oppose</p> <p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p>	
<p><b>M2.</b> The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall have evidence it provided documentation of the program and its</p>	<p><b>MR3</b> Confirmation that documentation of the existence and implementation of the RAS maintenance and testing program(s) was provided within the timelines</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>Amended to align with requirement</p>	<p><input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input checked="" type="checkbox"/> Oppose</p>	

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<p>implementation to the appropriate Regional Reliability Organizations and NERC on request (within 30 calendar days).</p>	<p>specified in requirement R3.</p>	<p>R3.</p>	<p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p> <p>As a general principle, TransAlta believes that a confirmation from the AESO should be an option available to the entity to assist them in demonstrating their own compliance; however a confirmation should not be a requirement if the entity has proper evidence, such as paper trails of submissions etc. to demonstrate compliance. Confirmation from the AESO provides no additional value.</p> <p>.</p> <p>TransAlta does not understand what documentation of existence means? The presence of the document itself is by definition its existence. As written this would require further documentation that the document exists. Again, the measure as set forth in the NERC standard is much clearer and should be used:  <b>M2.</b> The Transmission Owner, Generator Owner, and Distribution</p>	

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			Provider that owns an SPS shall have evidence it provided documentation of the program and its implementation to the appropriate Regional Reliability Organizations and NERC on request (within 30 calendar days).	
	<b>MR4</b> A list exists and is published that identifies all RASs as required in requirement R4.	<input checked="" type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Deleted  Added to align with requirement R4.	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose  <i>Insert comments, reason for position, and alternate proposal (if any).</i>  TransAlta recommends that MR4 be rewritten as follows:: Confirmation exists that the ISO notified effective entities of any changes in the ISO RAS database and that they maintain and publish the ISO RAS database.	
<b>Compliance</b> To view the compliance section D of the NERC reliability standard follow this link: <a href="http://www.nerc.com/files/PRC-017-0.pdf">http://www.nerc.com/files/PRC-017-0.pdf</a>		The Alberta reliability standards do not contain a compliance section. Compliance with all Alberta reliability standards is completed in accordance with the Alberta Reliability Standards Compliance Monitoring Program, available on the AESO website at:		

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		<a href="http://www.aeso.ca/loadsettlement/17189.html">http://www.aeso.ca/loadsettlement/17189.html</a> .		
<b>Regional Differences</b> None identified.	None identified.	Not applicable in Alberta		

<b>Definitions</b>	<b>Comments</b>	<b>Rationale and/or Alternate Proposal</b>
<b>(a) New</b> NA		
<b>(b) Removals</b> N/A		
<b>(c) Amendments</b> N/A		

TransAlta general comments:

The text in the draft standard does not show defined terms in bold and this makes it somewhat difficult to fully interpret the intention of the AESO in using particular language.